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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/980,809

10/19/2001

Dietmar Rudolph

520.1004

8344

7278

7590

05/30/2007

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EXAMINER

SWERDLOW, DANIEL

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

05/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/980,809	RUDOLPH, DIETMAR	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel Swerdlow	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2007 and 09 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 4,6-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 10-13 is/are allowed.
- 6) ☒ Claim(s) 4,6 and 14 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 April 2007 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. **Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laurent (WO 98/24201) in view of Wilkens (US Patent 4,309,711) and further in view of well-known prior art and further in view of Komaili et al. (US Patent 6,529,730).**
4. WO 98/24201 is prior art with respect to the present application under 35 USC 102(a) due to its publication on 4 June 1998. For convenience, US 6,418,300 is relied upon as an English translation. Column, line and figure citations are made to the US patent.
5. Regarding Claim 4, Laurent discloses a system for digital radio broadcasting using an amplitude modulation (AM) transmitter in a shortwave range (column 1, lines 9-15). Therefore, Laurent anticipates all elements of Claim 12 except providing a backward channel to the transmitter for signals received in a target area and using the backward channel to provide high reception quality and coverage reliability. Wilkens discloses a digital radio transmission system

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(Fig. 1) with a backward channel ( $T_B$  to  $R_A$ ) for a quality estimate of the signal received by a receiver 20 that is used as a parameter to adjust the power level of the transmitter to maintain reception quality and coverage reliability (column 2, lines 23-49). Wilkens further discloses that such an arrangement makes it possible to compensate for adjacent and co-channel interference, and for certain transmission distortion effects, in addition to degradation due to fading (signal level variation), and therefore to operate at much lower average signal levels. It would have been obvious to one skilled in the art at the time of the invention to apply the backward channel feedback taught by Wilkens to the shortwave AM digital radio broadcast system taught by Laurent for the purpose of realizing the aforesaid advantages. Therefore, the combination of Laurent and Wilkens makes obvious all elements except use of an Internet as a feedback channel and influencing coding. Examiner has taken uncontested official notice of the fact that use of an Internet to transmit information was well known at the time of the invention. One skilled in the art would have known that use of the Internet provides economical and flexible communications. It would have been obvious to one skilled in the art at the time of the invention to apply the well known Internet to the combination made obvious by Laurent and Wilkens for the purpose of realizing the aforesaid advantages. Komaili discloses determination of transmitter coding by parameters received from the receiver (column 2, lines 34-39; column 3, lines 10-15). Komaili further discloses that such an arrangement provides best possible signal quality. It would have been obvious to one skilled in the art at the time of the invention to apply the coding determination taught by Komaili to the combination made obvious by Laurent, Wilkens and well known prior art for the purpose of realizing the aforesaid advantages.

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6. Regarding Claim 6, Laurent further discloses a broadcasting system (column 1, lines 9-13).

7. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laurent (WO 98/24201) in view of Wilkens (US 4,309,771) and further in view of well-known prior art.**

8. Regarding Claim 14, Laurent discloses a system for digital radio broadcasting using an amplitude modulation (AM) transmitter in a shortwave range (column 1, lines 9-15). Therefore, Laurent anticipates all elements of Claim 14 except providing a backward channel on the Internet to the transmitter for signals received in a target area and using the backward channel to provide high reception quality and coverage reliability. Wilkens discloses a digital radio transmission system (Fig. 1) with a backward channel ( $T_B$  to  $R_A$ ) for a quality estimate of the signal received by a receiver 20 that is used to adjust the power level of the transmitter to maintain reception quality and coverage reliability (column 2, lines 23-49). Wilkens further discloses that such an arrangement makes it possible to compensate for adjacent and co-channel interference, and for certain transmission distortion effects, in addition to degradation due to fading (signal level variation), and therefore to operate at much lower average signal levels. It would have been obvious to one skilled in the art at the time of the invention to apply the backward channel feedback taught by Wilkens to the shortwave AM digital radio broadcast system taught by Laurent for the purpose of realizing the aforesaid advantages. Therefore, the combination of Laurent and Wilkens makes obvious all elements except use of an Internet as a feedback channel. Examiner has taken uncontested official notice of the fact that use of an Internet to transmit

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information was well known at the time of the invention. One skilled in the art would have known that use of the Internet provides economical and flexible communications. It would have been obvious to one skilled in the art at the time of the invention to apply the well known Internet to the combination made obvious by Laurent and Wilkens for the purpose of realizing the aforesaid advantages.

***Allowable Subject Matter***

9. Claims 8 and 10 through 13 are allowable for the reasons stated in the previous Office actions.
10. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. Claim 7 is allowable matter for the reasons stated in the previous Office actions.

***Response to Arguments***

12. Applicant's arguments with respect to Claims 4, 6 and 14 filed 5 April 2007 have been fully considered but they are not persuasive.
13. On page 6 of the response filed on 5 April 2007, applicant alleges that the cited prior art fails to disclose "influencing coding" as claimed. Examiner respectfully disagrees. As detailed in the prior art rejection above, Komaili provides teaching and motivation for this element.
14. On page 7 of the response, applicant alleges that Wilkens fails to disclose "influencing the number of modulation stages" as recited in Claim 14. Examiner respectfully disagrees. As

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applicant admits, Wilkens discloses regulation of the power output of amplifier 14 by the operation of attenuator 41. Because the attenuator and amplifier combination controllable varies the radio frequency output of the transmitter, it clearly constitutes a modulation stage, as claimed. Influencing one of a plurality of modulation stages inherently influences the net effect of the totality of the stages. As such, the number (i.e., plurality) of the modulation stages is influenced. While it appears that applicant interprets the recitation "influencing the number of modulation stages" as a variation in the quantity of stages employed, the recitation can also be reasonably interpreted to mean affecting the operation of the group of modulation stages. Since the original specification sheds no light on the interpretation of the recitation, both interpretations must be within the scope of the claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Swerdlow  
Primary Examiner  
Art Unit 2615

ds

25 May 2007